

**BE -08**

**RELATED KNOWLEDGE OF DIARRHEA IN INFANTS WITH ASI  
EXCLUSIVE BREASTFEEDING BEHAVIOR IN WEST JAVA**

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**Abstract**

This study was conducted based on the data given is the province of West Java provincial government with the highest number of infant deaths in Indonesia since 2006. Although statistically Infant Mortality Rate ( IMR ) in West Java is still smaller when compared to some other provinces but when seen from the number of population, especially the number of babies born each year, the number of infant deaths in West Java categorized as high even in Indonesia is the highest average average of 800 deaths annually. The purpose of this study wanted to test the potential of breast milk in inhibiting the growth of bacteria that cause diarrhea in infants in a laboratory scale . In the future, the results of this study as a reference for the formulation of policy making use of exclusive breastfeeding for nursing mothers in order to make the formulation of policy to reduce the infant mortality rate in West Java Province. The method is used in addition to in vitro laboratorium on plate using the Kirby - Bauer disc or methods also use a survey method to a location by using a questionnaire instrument / questionnaire. Population taken as many as six ( 6 ) districts that include high infant mortality rate is the district of Bogor, Sukabumi district, Cianjur district, Karawang regency, district and county majalengka West Bandung. Samples were taken every kabupaten many as 15-20 people so that the number of respondents by about 100 people. The data were processed using correlation analysis between knowledge, attitude, cleanliness, and diarrheal diseases the number of infant deaths. The results turned out to be no significant relationship between knowledge, attitude, cleanliness, and diarrheal diseases the number of infant deaths is equal 25,26%. That is received and rejected, ha ho there was no relationship between knowledge of diarrhea with the granting exclusive breast-fed t count ( = 1,30 smaller than t table = 2,36 ).

**Keywords :** breastfeeding , IMR , diarrhea , agar plates , bacteria .

**INTRODUCTION**

Health problems are often found in infants that infectious diseases. Infectious diseases still need to watch toddlers are diarrhea or gastroenteritis (Widjaja, 2003). Diarrhea is a state of increased frequency of bowel movements and dilution, the frequency of which is still considered normal is about 1-3 times and the number of 200-250 grams a day. Some patients experience an increased frequency of bowel movements and dilution, although the number is less than 250 grams a day in the period.

Globally each year there are approximately 2 billion cases of diarrhea with mortality 1.5 million per year. In developing countries, children under 3 years of age had an average of 3

episodes of diarrhea per year. Each episode of diarrhea will cause a loss of nutrients they need to grow, so diarrhea is a major cause of malnutrition in children (WHO, 2009).

Diarrhea and vomiting are typical symptoms for gastro-intestinal diseases. Diarrhea reduces the amount of food that can be absorbed by because there is transit time (travel time) is shortened. In addition there is the excretion of water and minerals such as sodium , potassium and chloride. Losing such should be returned as soon as possible , indigestion and absorption is the cause of the diarrhea. Various laboratory tests should be performed to find the cause ( Pudiadi , 2000).

Diarrhea is common in school-age children and toddlers where the incidence of diarrhea is the second major disease after flu rotavirus. This disease has an important picture that diarrhea and vomiting, consequently dehydrated client / dehydration. And dehydrated state if not addressed will lead to hypovolemic shock , especially the case of lack of fluids or dehydration occurs in children where 80% of the body is composed of fluids. The incidence of diarrhea in children in the world reached 1 billion cases per year, with a death toll of about 4 million people. Statistics recorded each year in America there are 15-25 million cases of diarrhea and 17.5 million are children under five. Child mortality due to diarrhea in developing countries is about 2.8 million each year (MOH RI , 2011). Statistics show that every year of diarrhea attack Indonesia's population of 45 million , two-thirds is a toddler with a death toll of about 500,000 inhabitants (MOH RI , 2011).

Acute gastroenteritis is a public health problem, especially in areas with poor sanitation. Some types of bacteria such as Shigella and E. coli Enterotoksigenic (ETEC) and rotavirus is the leading cause of acute gastroenteritis in Indonesia. Based on research in Central Java ( Central Java) and East Java (East Java) during the year 2011 amounted to 50.66 % of infants suffering from acute gastroenteritis caused by rotavirus. Ministry of Health of the Republic of Indonesia stated that the infant mortality rate in Indonesia is still relatively high when compared with the member states Association South East Asia Nation (ASEAN). The main causes of morbidity and mortality in children in developing countries is diarrhea. Until now remain as a child killer diarrhea ranks first in Indonesia ( Andrianto, 1995). Here are some of the causes of diarrhea are:

- Infection by bacteria and parasites (Vibrio Cholera, Shigella, ETEC, Salmonella, Campylobacter, Entamoeba Disentriae , giardiasis )
- Attacks viruses ( rotavirus )
- Allergies to foods, infant formula or food poisoning
- Infection by bacteria or viruses that accompany other diseases such as measles, infection ear, throat infections, malaria, etc
- Artificial sweeteners.

Symptoms are diarrhea or diarrhea with watery stool frequency 4x or more in day, which is sometimes accompanied by :

- Vomiting
- Agency lethargic or weak
- Heat
- No appetite
- Blood and mucus in stools

In addition there are several symptoms that can be used as a guide to find out what the cause of diarrhea in infants , namely :

1. If diarrhea occurs accompanied by vomiting, abdominal pain , fever , chills , feeling sick , then it is likely there is a problem in gastroenteritis ( digestive ) . If accompanied by the presence of blood in the stools due to the possibility of bacterial infection .
2. Diarrhea occurs after consuming infant formula or too much of certain foods , the possibility of diarrhea caused by problems with food or milk .

3. Diarrhea accompanied by abdominal bloating , gas and impurities such as oily , probably caused by a parasitic infection .
4. Diarrhea occurred after the baby is taking certain medications such as antibiotics or other drugs , chances are due to the side effects of drugs consumed .
5. If the baby is unconscious or having difficulty breathing , you should immediately bolt to the hospital .
6. Baby became fussy after feeding , abdominal bloating , diarrhea and dirt odor problems , probably caused by lactose intolerance or who can not tolerate lactose in the milk .
7. If diarrhea is accompanied by vomiting appear , itching , nasal congestion , swelling , shortness of breath , wheezing , difficulty swallowing and the onset of rash on the skin , caused by food allergies kemunginan consumed by infants .
8. Diarrhea with bloated feeling or gaseous , vomiting , colic , bloody feces , refusing to eat , coughing , wheezing , and these symptoms occur about 45 minutes after consuming milk , probably caused the baby can not tolerate the protein contained in the milk .
9. Experiencing chronic diarrhea , impaired growth , cough accompanied with a whimper , sigh breath or wheezing , probably caused disease cystic fibrosis .

The benefits of exclusive breastfeeding

A. Benefits for Babies.

The benefits of exclusive breastfeeding for infants ( Roesli , 2005) , namely :

1. Breast milk as a nutrient which breastfed as a single food to meet all the needs of growing babies up to age 6 months .
2. Breastfed infants to increase endurance because it contains various immune antibodies that will be rarely sick . Breastfeeding also reduces the occurrence of diarrhea , earache and respiratory infections and allergy attacks .
3. Exclusive breastfeeding increases intelligence because they contain fatty acids needed for brain growth potential so that breastfed babies are smarter .
4. Exclusive breastfeeding improves the fabric of affection that can support the development of personality , emotional intelligence , spiritual maturity and good social relations .

B. Benefits for Mothers

The benefits of exclusive breastfeeding for the mother when giving exclusive breastfeeding ( Roesli , 2005) , namely :

1. Reduce bleeding after childbirth due to breastfeeding mothers increased levels of oxytocin are useful also for constriction / closure of the blood vessels so that the bleeding will stop faster .
2. Reduce the occurrence of anemia due to iron deficiency because breastfeeding reduces bleeding . Space pregnancy because breastfeeding is a contraceptive method that is safe, inexpensive , and quite successfully .
3. Shrink the uterus due to maternal oxytocin levels increased breastfeeding helps the uterus to pre-pregnancy size .
4. Trim back faster because breastfeeding requires energy , the body will take it from the fat accumulated during pregnancy .
5. Reduce the possibility of cancer .
6. More economical and cheap as it can save money on infant formula , breastfeeding supplies and preparation of infant formula .
7. Not troublesome and time -saving because breast milk can be given immediately without having to prepare or cook water .
8. Portable and practical as it is easy to carry anywhere so while traveling do not need to carry a variety of tools to breastfeeding .

9. Mother gives satisfaction , pride and profound happiness to have acquired exclusive breastfeeding .

## RESEARCH METHOD

Method used is a survey method the population and the sample are all breastfeeding mothers from 0 months to 24 months who were region of West Java . While the population is made up of four areas scattered Priangan covers an area of West Java. Of the seven regions of the samples taken from five districts namely Majalengka , Sukabumi , Karawang , Bogor, Cianjur and Bandung Barat based on the percentage of the highest infant mortality rate in West Java ( West Java Data BAPEDA ). Samples were taken from the highest infant mortality rate in West Java , there are districts that serve a population of six districts namely district. Bogor, Sukabumi, Cianjur, Karawang, Bandung Majalengka and western districts, each district is taken 1 posyandu consists of 15-20 people so that the sample totaled 120 people .

$$(r - 1)(t - 1) > 6$$

$$(r - 1)(6 - 1) > 6$$

$$5r > 7$$

$$r > 1.75 \text{ rounded}$$

The instrument used to observe the behavior of lactating mothers.

To determine the behavior of lactating mothers made through filling a questionnaire in which there are questions that represent the behavior of mothers breastfeeding can be drawn so that the causes of infant mortality are factors other than breastfeeding. Schedule study conducted in October-November 2013.

## RESULT AND DISCUSSION

### A. Results of the study

Table 4.1 . The relationship between knowledge with breastfeeding

No	Town	Knowledge	Breastfeeding	x	y	xy
1	Sukabumi	68.44	78.01	1.23	-9.89	-12.16
2	Cianjur	53.53	55.98	-20.80	-19.57	407.06
3	Kab Bogor	71.05	75.32	-1.46	5.99	-8.75
4	Karawang	69.72	72.94	-3.84	15.99	-61.40
5	KBB	78.39	79.6	2.82	10.67	30.09
6	Kota Bogor	75.54	97.55	20.77	6.68	138.74
7	Majalengka	68.44	78.01	1.23	-9.89	-12.16
	$\Sigma$	537.41		424.7		481.41
	X bar	76.78		60.68		
	N	7				
	$\Sigma x^2$	891.89				
	$\Sigma y^2$	1028.64				
	$\Sigma xy$	481.41				

$r_{xy}$	0.50			t hit	1.30		25.26%
$r_{tab}$	0.75			t tab	2.36		

Received and rejected an inference,  $h_0$  so no significant relation exists. This means there was no relationship between knowledge of diarrhea with the granting exclusive breast-fed nursing

mother.

#### B. Discussion

Variable X is used in the correlation test is knowledge, sanitation and health posts and Y variables used is diarrhea . Based on the statistical analysis of the Product Moment Correlation test correlation between variables X1 is knowledge with Y of 0.20. Value of 0.20 indicates a low degree of correlation ( Sugiyono , 2010:231 ). The coefficient of determination  $r^2 = 0.202$  or 0.39 means that the variance occurred in 39.9 % variable X can be described by a variant that occurs in variable Y. Based on statistical analysis t test thit obtained by 0.46 . With 95 % confidence tarap with  $n = 7$  , then t table 2.36 . Because t hit smaller than t table this means there is a positive relationship .

Based on the statistical analysis of the Product Moment Correlation test correlation between variables X2 is sanitary with Y of 0.85. Value of 0.85 indicates a very strong relationship level ( Sugiyono , 2010:231 ). The coefficient of determination  $r^2 = 0.852$  or 0.72 means the variance that occurs in X 72.93 % variable can be explained by the variance that occurs in variable Y. Based on statistical analysis obtained thit t test of 3.67. With 95 % confidence tarap with  $n = 7$  , then t table 2.36. Because thit greater than ttable This means there is a positive relationship.

Based on the statistical analysis of the Product Moment Correlation test correlation between variables X3 is posyandu with Y by 0.71. Value of 0.71 indicates moderate degree of correlation ( Sugiyono , 2010:231 ). The coefficient of determination  $r^2 = 0.712$  or 0.50 means the variance that occurs in X 50.41 % variable can be explained by the variance that occurs in variable Y. Based on statistical analysis obtained t hit t test of 1.30. With 95 % confidence tarap with  $n = 7$  , then t table 0.75. Because t hit smaller than t table this means there is a negative relationship.

#### CONCLUSION AND SUGGESTION

ASI eksklusif is very important for grew a baby and this research there was no relationship between knowledge of diarrhea with the granting exclusive breast-fed t count ( = 1,30 smaller than t table = 2,36 ). This means there was no relationship between knowledge of diarrhea with the granting exclusive breast-fed.

#### REFERENCES

- Arikunto, S. 2008. *Prosedur Penelitian Suatu Pendekatan Praktek*, Jakarta: Rineka Cipta.  
\_\_\_\_\_, 2008. *Dasar-dasar Evaluasi Pendidikan*, Jakarta: Bumi Aksara.  
Dwidjoseputro, D. 2010. *Dasar-dasar Mikrobiologi*, Jakarta: Djambatan,  
<http://www.depkes.go.id>, 25 Juli 2009. Diakses pada 12 Nopember 2011.  
<http://www.kompas.com>, 25 Juli 2009. Diakses pada 12 Nopember 2011.  
Notoatmodjo, S. 2003, *Ilmu Kesehatan Masyarakat*. Jakarta: Rineka Cipta.  
\_\_\_\_\_, Bina Husada, Palembang: STIK Bina Husada, Vol. 1, No. 1, Oktober.  
Pelczar. 2009. *Dasar-dasar Mikrobiolog*. Jakarta Universitas Indonesia Press.  
\_\_\_\_\_, 2008. *Statistik Pendidikan*, Jakarta: Raja Grafindo Persada.  
Sugiyono. S. 2010. *Statistik Untuk Penelitian*. Bandung : Alfabeta.  
Volk & Wheeler. 2008. *Mikrobiologi dasar*. Jakarta Erlangga.  
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